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AREI UPDATES 1997

Updates on Agricultural Resources and Environmental Indicators Number 3 June 1997

Major Land Use Changes in the Contiguous 48 States

- Urban area increased 26 percent from 1982-92, a slowdown from the 36-percent rate of the 1960's and 1970's.
- Except for urban area, land use is dynamic with land moving into and out of each of the major uses.
- Most land stayed in the same use from 1982-92; no major use category dropped more than 7 percent.

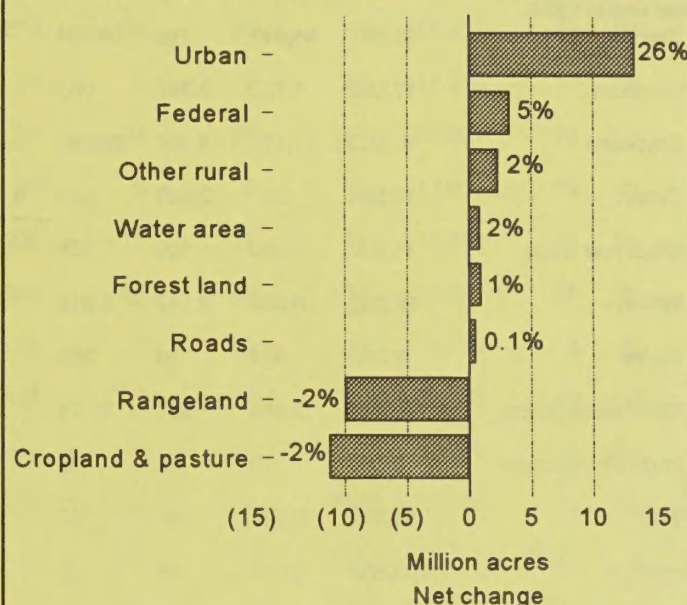
Dynamic changes (land moving into and out of uses) occurred in land use between 1982 and 1992 (table 1). For example, 17 million acres classified as rangeland in 1982 had shifted to other uses by the end of the decade (408,901-391,654 in row 15). However, this was partially offset by 7 million acres converted to rangeland from other uses (398,949-391,654 in column 15), resulting in a net loss of 10 million acres. Even so, 96 percent of the 1982 rangeland did not change use during the decade. Changes from one crop to another are especially dynamic and, for the most part, represent normal cropping rotation practices and responses to crop prices.

Inventories conducted by USDA's Natural Resources Conservation Service (NRCS) show 34 million acres moving into the Conservation Reserve Program from 1982 to 1992. While most of this came from cropland (32 million acres), some also came from pasture land, rangeland, and land classified as forest.

The National Resources Inventory (NRI) allows analysts to determine changes in major land uses occurring from one inventory date to another. This is possible because the inventories are sample based, using the same sample points for each inventory. Thus, with the use of a transition matrix, we know not only the net change in land use, but also the gross changes to and from various uses (table 1).

The urban and built-up category of land use increased from 52 million acres in 1982 to 65 million acres in 1992, or by 26 percent. The increased area came mostly from forest land, 5.2 million acres, pasture and range, 4.3 million acres, and cropland, 3.7 million acres. While the percentage increase in urban use was large, net percentage decreases in cropland (-2%) and rangeland (-2%) were small since

Net change in land use, 48 States, 1982-92



Source: USDA, ERS, based on NRCS 1992 Natural Resources Inventory data.

the base areas of these categories are much larger than urban area. Also the percentage increase in urban area is smaller than the increases of the 1970's and the 1960's, 36 percent each decade (*Agricultural Resources and Environmental Indicators*, USDA, AH-705, Dec.1994).

Most land uses remained in the same use category during the 10-year period from 1982-92 (table 2). With the exception of "Other rural land," no major land use lost more than 5 percent to other land use categories. In particular, urban and built-up land seldom shifts to other uses.

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About AREI UPDATES

AREI UPDATES is a periodic series that supplements and updates information in *Agricultural Resources and Environmental Indicators (AREI)*, USDA, ERS, AH-705, Dec. 1994. **UPDATES** report recent data from surveys of farm operators and others knowledgeable about changing agricultural resource use and conditions, with only minimal interpretation or analysis. Please contact the individual listed at the end of the text for additional information about the data in this **UPDATE**. If you would like to be added to the mailing list or have other questions about **AREI UPDATES** or **AREI**, contact Richard Magleby, (202) 219-0436. [rmagleby@econ.ag.gov]. AREI UPDATES are available on the ERS web site—<http://www.econ.ag.gov/Briefing/arei/arei.htm>—and on AutoFax (202) 219-1107 (wait until voice prompt gives all options, then press 4; when prompted again, enter 20200 to get a listing of 1996 issues, and 20300 for available 1997 issues).

Table 1—Land use change, contiguous 48 States, 1982-92

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Land use ¹	1982 land use totals	Land use in 1992											
		Corn	Sorghum	Soybeans	Cotton	Other row crops	Wheat	Barley	Other field crops	Horti- cultural crops	Hay	Pasture	Idle & summer- fallow
		1	2	3	4	5	6	7	8	9	10	11	12
		Thousand acres											
1992 land use totals	1,940,011	86,639	15,187	59,456	13,938	12,292	72,918	6,939	16,278	6,657	53,564	127,694	36,625
Land use in 1982:													
1 Corn	91,381	45,697	789	18,354	454	1,883	3,764	295	1,740	130	8,101	2,402	2,061
2 Sorghum	17,052	1,722	5,267	967	615	180	3,246	28	382	8	628	689	1,206
3 Soybeans	67,020	17,191	1,101	26,943	2,230	929	3,601	97	1,500	71	1,946	2,525	2,771
4 Cotton	17,034	287	2,659	548	8,119	390	1,127	134	187	67	349	203	847
5 Other row crops	11,822	1,380	109	558	399	4,617	1,215	241	343	100	735	514	630
6 Wheat	89,102	5,836	3,147	5,315	832	1,452	38,257	2,131	2,490	60	3,164	2,155	11,909
7 Barley	8,065	444	18	359	84	310	1,906	1,585	368	28	823	168	924
8 Other small grains	22,874	2,649	331	2,171	208	473	3,595	637	5,809	37	1,838	1,054	1,896
9 Horticultural crops	6,630	73	16	38	42	114	40	27	37	5,278	126	190	156
10 Hay	51,539	6,551	383	1,767	280	622	2,418	524	1,436	116	28,592	3,508	1,101
11 Pasture	133,888	2,686	246	1,282	178	573	1,229	182	614	291	3,967	106,295	712
12 Idle & summer fallow	36,438	1,007	739	515	268	361	10,312	809	895	81	1,504	1,467	11,083
13 Other land in farms	2,882	77	12	46	4	25	61	9	16	31	84	171	28
14 Farmsteads	10,733	149	15	112	12	14	47	2	12	12	74	185	40
15 Rangeland	408,901	322	325	74	84	185	1,874	185	365	221	998	2,452	1,017
16 Forest land-grazed	65,678	27	1	12	1	12	15	2	6	5	39	900	7
17 Forest land-not grazed	328,685	364	18	299	55	108	59	8	33	57	223	1,971	100
18 Other rural land	39,213	43	0	27	0	7	19	15	16	16	117	461	25
19 Urban and built-up	51,897	0	0	0	0	0	0	0	0	0	0	0	0
20 Paved roads	12,922	39	2	19	5	5	18	0	4	3	18	49	7
21 Rural roads & railroads	13,554	32	5	16	3	5	25	5	9	1	17	39	11
22 Federal land	404,701	34	1	12	63	24	65	22	13	40	184	196	83
Land area total	1,892,011	86,610	15,183	59,436	13,934	12,287	72,889	6,937	16,274	6,652	53,527	127,594	36,612
23 Water area	48,000	30	4	20	4	5	29	2	4	5	37	100	13

¹Diagonal numbers, in **bold**, are acres that remained in the same use during the decade. Nondiagonal numbers across rows represent land moving out of the 1982 land uses. Nondiagonal numbers down columns represent land moving into the 1992 land uses. For example, forest land-grazed (column 16) has a gross loss of 9,359,000 acres during the decade (65,678,000 acres in 1982, minus 56,319,000 acres [diagonal] that remained in the category). However, the net loss was only 2,712,000 acres (row 16 minus column 16 totals) because other uses, primarily pasture, 3,197,000 acres, rangeland, 1,186,000 acres, and forest land-not grazed, 1,752,000 acres, were converted to forest land-grazed.

²CRP is not shown as a row item since it did not exist in 1982.

Source: USDA, ERS, based on NRCS 1992 National Resources Inventory data.

Table 1—(continued)

Land use in 1992												
Conser- vation Reserve Program ²	Other land in farms	Farm- steads	Range- land	Forest land grazed	Forest land not grazed	Other rural land	Urban and built-up	Paved roads	Rural roads & railroads	Federal land	Land area	Water area
CRP	13	14	15	16	17	18	19	20	21	22		23
Thousand acres												
34,040	2,315	11,387	398,949	62,966	331,992	40,939	65,350	13,430	13,573	407,989	1,891,115	48,896
3,688	63	198	44	16	398	205	874	33	30	76	91,293	88 (1)
1,734	7	27	168	5	27	13	89	3	3	20	17,033	19 (2)
4,002	70	117	14	20	791	176	624	34	24	147	66,921	99 (3)
1,745	2	19	55	0	32	52	89	5	9	88	17,011	23 (4)
334	13	32	73	2	125	52	236	18	17	71	11,812	10 (5)
10,873	38	117	417	14	151	74	390	26	43	150	89,041	61 (6)
690	4	8	232	0	1	9	38	2	13	48	8,062	3 (7)
1,550	50	46	181	8	49	51	127	6	13	58	22,835	39 (8)
4	9	20	23	3	46	32	268	8	11	56	6,617	12 (9)
1,791	52	149	395	83	508	253	701	25	28	206	51,487	51 (10)
1,306	151	412	1,485	3,197	5,114	841	2,357	86	54	311	133,566	322 (11)
5,353	30	42	483	41	725	279	308	14	24	80	36,421	17 (12)
22	1,721	27	69	26	366	30	44	1	1	6	2,876	6 (13)
26	8	9,658	81	33	194	6	50	1	0	0	10,732	1 (14)
755	41	250	391,654	1,186	338	807	1,913	97	110	3,301	408,552	34 (15)
32	3	61	927	56,319	6,376	60	321	22	16	449	65,610	68 (16)
103	41	206	209	1,752	315,147	792	4,834	242	150	1,521	328,290	395 (17)
32	7	0	121	11	798	36,944	177	8	10	263	39,117	96 (18)
0	0	0	1	0	2	8	51,884	0	0	1	51,897	0 (19)
0	1	0	33	9	124	10	2	12,572	2	0	12,921	2 (20)
0	0	0	57	14	68	3	3	227	13,017	0	13,554	1 (21)
1	5	0	1,965	201	458	191	18	0	0	401,124	404,701	0 (22)
34,039	2,314	11,387	398,688	62,940	331,838	40,887	65,345	13,430	13,573	407,976	1,890,349	1,662
1	1	0	261	26	154	52	6	0	0	12	766	47,234 (23)

Table 2—Distribution of land use change, 48 contiguous States, 1982-92

Land use ¹	Total	Land use in 1992							
		Cropland & pasture	Range land	Forest land	Other rural land	Urban and built-up	Roads	Federal land	Water
					Percent				
Total 1992	100	28.1	20.6	20.4	2.7	3.4	1.4	21.0	2.5
Land use in 1982:									
Cropland & pasture	100	95.1	0.7	2.1	0.6	1.1	0.1	0.2	0.1
Rangeland	100	2.2	95.8	0.4	0.3	0.5	0.1	0.8	0.1
Forest land	100	1.1	0.3	96.3	0.3	1.3	0.1	0.5	0.1
Other rural land	100	3.0	0.4	2.1	93.3	0.5	0.0	0.5	0.2
Urban and built-up	100	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0
Roads	100	1.3	0.3	0.8	0.0	0.0	97.5	0.0	0.0
Federal	100	0.2	0.5	0.2	0.0	0.0	0.0	99.1	0.0
Water	100	0.5	0.5	0.4	0.1	0.0	0.0	0.0	98.4

¹Numbers across the rows show the percent of land changing use from 1982 to 1992. Diagonal numbers, in **bold**, show the percent of each category that remained unchanged.

Source: USDA, ERS, based on NRCS 1992 National Resources Inventory data.

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